

1. (Currently Amended) A backing plate which is used for a sputtering apparatus for forming a thin film on a substrate, and to which a substantially rectangularly-shaped target is bonded, the backing plate comprising:

cooling means for feeding a cooling medium to the backing plate at a predetermined flow rate, the cooling means including at least one cooling medium flow passage, ~~wherein at least one cooling medium flow passage includes at least one branch,~~ and

wherein there is substantially uniform temperature distribution in the target by virtue of:

(a) controlling the flow rate of the cooling medium;

(b) feeding the cooling medium to ~~predetermined portions~~ at least one corner of the backing plate and to at least a portion of the periphery of the backing plate such that a different level of cooling is achieved at the at least one corner than at the at least a portion of the periphery; and

(c) applying different sputtering powers to predetermined portions of the target, and

wherein the substantially uniform temperature distribution in the target results in formation of a thin film having a substantially uniform film thickness.

2. (Currently Amended) The backing plate of claim 1, wherein the ~~predetermined portions of the backing plate to which the cooling medium is fed include at least a periphery of the backing plate~~ the level of cooling is higher at the at least one corner than at the at least a portion of the periphery.

3. (Original) The backing plate of claim 2, wherein the backing plate is formed by electron beam welding of a member having a groove as a cooling medium flow passage and a member for covering the grooves.

4. (Original) The backing plate of claim 2, wherein the backing plate is formed by laser beam welding of a member having a groove as a cooling medium flow passage and a member for covering the grooves.

5. (Currently Amended) The backing plate of claim 1, wherein ~~the target is formed in a rectangular plate shape and~~ a higher sputtering power than that applied to a central portion of the target is applied to four corner portions of the target.

6. (Previously Presented) The backing plate of claim 5, wherein an inlet for at least one cooling medium flow passage is provided at a position in the backing plate corresponding to at least one of the four corner portions of the target.

7. (Currently Amended) A sputtering method for forming a thin film on a substrate using a target, the method comprising the steps of:

applying different sputtering powers to portions of the target; and

cooling the target via a cooling means that includes at least one cooling medium flow passage for feeding a cooling medium to at least one corner of the a backing plate at a predetermined flow rate and to at least a portion of the periphery of the backing plate such that a different level of cooling is achieved at the at least one corner than at the at least a portion of the periphery, wherein at least one cooling medium flow passage includes at least one branch, and

wherein the method is effective to ensure a substantially uniform temperature distribution by eliminating temperature unevenness in a surface of the target, the uniform temperature distribution enabling formation of a thin film having a substantially uniform film thickness.